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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/855,628 | 05/15/2001 | Gerard De Haan | NL 010094 | 9268 |

24737 7590 08/04/2004

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

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| EXAMINER |
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SENF, BEHROOZ M

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| ART UNIT | PAPER NUMBER |
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2613

DATE MAILED: 08/04/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/855,628

Applicant(s)

DE HAAN ET AL.

Examiner

Behrooz Senfi

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 – 6, 13 – 18 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Hazra et al (US 6,594,313).

Regarding claim 1, Hazra '313 discloses "a method for detecting motion at temporal intermediate position between previous and next images (i.e. fig. 4), in which a criterion function for candidate vector is optimized and function depending on data from both previous and next images and in which the optimizing is carried out at the temporal intermediate position in non-covering (not covered/non-overlap) and non-uncovering (covered/overlap) areas, characterized in that the optimizing (best match) is carried out at the temporal position of the next image in covering areas and at the temporal position of the previous image in uncovering areas" (i.e. col. 1, lines 52 – 66).

Regarding claims 3 and 15, Hazra '313 discloses, "criterion function is a matching error" (i.e. col. 6, lines 25 – 35).

Regarding claims 2, 4 – 6, 14 and 16 - 18, the limitations claimed, (candidate vector and image shifting, and covering/uncovering detector in the matching process,

and the fraction α is set to "0" and "1") reads on (i.e. col. 1, lines 54 – 65, col. 5, lines 34 – 45 and col. 6, lines 25 – 67, and α reads on predetermined threshold). Also note that fig. 7, shows α at .5 (i.e. $T + 1/2$).

Regarding claim 13, the limitations claimed are substantially similar to claim 1, and are apparatus of the method of claim 1, therefore the ground for rejecting claim 1 also applies here.

Regarding claim 25, Hazra '313 discloses, "display apparatus" (i.e. fig. 1).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7 – 12 and 19 – 24, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hazra et al (US 6,594,313) in view of Sun et al (US 6,480,615).

Regarding claims 7, Hazra '313 teaches, "a method for detecting motion at temporal intermediate position between previous and next images and criterion function for candidate vector is optimized and function depending on data from both previous and next images and in which the optimizing is carried out at the temporal intermediate position in non-covering (not covered/non-overlap) and non-uncovering (i.e. col. 1, lines 52 – 66). Hazra '313 fails to explicitly teach, "determining the velocity edge and foreground and background in the occlusion area". However, such features are well known and used in the prior art of the record as evidenced by Sun '615 (i.e. fig. 2 – 3,

col. 3, lines 5 – 50). Therefore, taking the combined teaching of Hazra '313 and Sun '615 as a whole, it would have been obvious to one skilled in the art at the time of the invention was made to use the process and estimate the motion (motion vector) in the vicinity of occlusions as taught by Sun '615 (i.e. col. 2, lines 65 – 67).

Regarding claims 11 and 23, combination of Hazra '313 and Sun '615 teaches “near edges it is tested whether the mentioned edge has moved over the first vector on one side of the edge or over”, which actually consider the motion vector in edge estimation (i.e. col. 3, lines 39 – 50).

Regarding claims 8 – 9 and 20 – 21, the limitations claimed are substantially similar to claim 7, therefore the ground for rejecting claim 7 also applies here, and as for “vector average” please see (col. 5, lines 5+ of Sun).

Regarding claims 10, 12, 22 and 24, the limitations claimed are substantially similar to claim 7. Therefore the ground for rejecting claim 7 also applies here.

Regarding claim 19, the limitations claimed are substantially similar to claim 7, and are apparatus of the method of claim 7, therefore the ground for rejecting claim 7 also applies here.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Behrooz Senfi** whose telephone number is **(703) 305-0132**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Chris Kelley** can be reached on **(703) 305-4856**.

Art Unit: 2613

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relative to the status of the application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

B. S. B. J.

7/20/2004


CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600